**2.4 The Chain Rule**

**Identify the peanut and the shell for each function.**

|  |  |  |
| --- | --- | --- |
| Function | peanut | shell |
|  | **-2x-1** | **( )2** |
|  |  |  |
|  |  |  |
|  |  |  |

**Find the first and second derivative of each using the appropriate rule with the chain rule:**

1. 2. 3.

4. 5. 6.

7. 8.

9. 10.

**Explain why the following are either true or false. If they are true, no explanation is needed.**

11. If , then

12. You would first apply the general power rule to differentiate *y = xsin3x.*

13. You would first apply the chain rule to differentiate *y = xsin3x.*

14. You would first apply the product rule to differentiate *y = xsin3x.*

15. If y = tan(3x), then y’ = 3sec2(x)